

159863  
PTO  
09/24/03

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# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	12-1054
First Inventor	James Matthew Murduck
Title	AI/AIOX/AI RESISTOR
Express Mail Label No.	EV 162112512 US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1.  Fee Transmittal Form (e.g., PTO/SB/17)  
*(Submit an original and a duplicate for fee processing)*
2.  Applicant claims small entity status.  
See 37 CFR 1.27.
3.  Specification [Total Pages 15]   
*(preferred arrangement set forth below)*
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (*if filed*)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4.  Drawing(s) (35 U.S.C. 113) [Total Sheets 3]
5. Oath or Declaration [Total Sheets 8]
  - a.  Newly executed (original or copy)
  - b.  Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional with Box 18 completed)*
    - i.  **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6.  Application Data Sheet. See 37 CFR 1.76

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

7.  CD-ROM or CD-R in duplicate, large table or Computer Program (*Appendix*)
8. Nucleotide and/or Amino Acid Sequence Submission (*if applicable, all necessary*)
  - a.  Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i.  CD-ROM or CD-R (2 copies); or
    - ii.  Paper
  - c.  Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9.  Assignment Papers (cover sheet & document(s))
10.  37 CFR 3.73(b) Statement *(when there is an assignee)*  Power of Attorney
11.  English Translation Document (*if applicable*)
12.  Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
13.  Preliminary Amendment
14.  Return Receipt Postcard (MPEP 503) *(Should be specifically itemized)*
15.  Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16.  Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17.  Other: .....

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

Continuation       Divisional       Continuation-in-part (CIP)      of prior application No.: .....

Prior application information:

Examiner \_\_\_\_\_

Art Unit \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only; The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

Customer Number: 27160      OR       Correspondence address below

Name			
Address			
City	State	Zip Code	
Country	Telephone	Fax	
Name (Print/Type)	John S. Paniaguas	Registration No. (Attorney/Agent)	31,051
Signature	<i>John S. Paniaguas</i>		Date Sept. 24, 2003

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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03110 U.S. PTO  
10/670101

09/24/03

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# FEE TRANSMITTAL

## for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 750.00

## Complete if Known

Application Number	Herewith
Filing Date	Herewith
First Named Inventor	James Matthew Murduck
Examiner Name	N/A
Art Unit	N/A
Attorney Docket No.	12-1054

## METHOD OF PAYMENT (check all that apply)

Check  Credit card  Money Order  Other  None

Deposit Account:

Deposit Account Number  
50-1214

Deposit Account Name

The Director is authorized to: (check all that apply)

Charge fee(s) indicated below  Credit any overpayments

Charge any additional fee(s) during the pendency of this application

Charge fee(s) indicated below, except for the filing fee & to the above-identified deposit account. Assign fee

## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity	Fee Code (\$)	Fee	Small Entity	Fee Code (\$)	Fee	Fee Description	Fee Paid
1001	750	2001	375			Utility filing fee	\$750.
1002	330	2002	165			Design filing fee	
1003	520	2003	260			Plant filing fee	
1004	750	2004	375			Reissue filing fee	
1005	160	2005	80			Provisional filing fee	
SUBTOTAL (1)		(\$ 750.)					

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
33	-20** = 13	x 18	= 234.
Independent Claims	7	- 3** = 4	x 84 = 336.
Multiple Dependent			

Large Entity	Small Entity	Fee Description
1202	18	2202 9 Claims in excess of 20
1201	84	2201 42 Independent claims in excess of 3
1203	280	2203 140 Multiple dependent claim, if not paid
1204	84	2204 42 ** Reissue independent claims over original patent
1205	18	2205 9 ** Reissue claims in excess of 20 and over original patent
SUBTOTAL (2)		(\$ 570.)

\*\*or number previously paid, if greater; For Reissues, see above

## 3. ADDITIONAL FEES

Large Entity	Small Entity	Fee Description	Fee Paid
1051	130	2051 65 Surcharge - late filing fee or oath	
1052	50	2052 25 Surcharge - late provisional filing fee or cover sheet	
1053	130	1053 130 Non-English specification	
1812	2,520	1812 2,520 For filing a request for ex parte reexamination	
1804	920*	1804 920* Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805 1,840* Requesting publication of SIR after Examiner action	
1251	110	2251 55 Extension for reply within first month	
1252	410	2252 205 Extension for reply within second month	
1253	930	2253 465 Extension for reply within third month	
1254	1,450	2254 725 Extension for reply within fourth month	
1255	1,970	2255 985 Extension for reply within fifth month	
1401	320	2401 160 Notice of Appeal	
1402	320	2402 160 Filing a brief in support of an appeal	
1403	280	2403 140 Request for oral hearing	
1451	1,510	1451 1,510 Petition to institute a public use proceeding	
1452	110	2452 55 Petition to revive - unavoidable	
1453	1,300	2453 650 Petition to revive - unintentional	
1501	1,300	2501 650 Utility issue fee (or reissue)	
1502	470	2502 235 Design issue fee	
1503	630	2503 315 Plant issue fee	
1460	130	1460 130 Petitions to the Commissioner	
1807	50	1807 50 Processing fee under 37 CFR 1.17(q)	
1806	180	1806 180 Submission of Information Disclosure Stmt	
8021	40	8021 40 Recording each patent assignment per property (times number of properties)	40.
1809	750	2809 375 Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810 375 For each additional invention to be examined (37 CFR 1.129(b))	
1801	750	2801 375 Request for Continued Examination (RCE)	
1802	900	1802 900 Request for expedited examination of a design application	

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 40.)

(Complete if applicable)

Name (Print/Type)	John S. Paniaguas	Registration No. (Attorney/Agent)	31,051	Telephone	312-902-5312
Signature					

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Attorney Docket No.: 12-1054

Application No.: Herewith

First Inventor: James Matthew Murduck

Title: Al/AlO<sub>x</sub>/Al RESISTOR PROCESS FOR INTEGRATED CIRCUITS

**CERTIFICATE OF MAILING BY "EXPRESS MAIL"**

"Express Mail" Mailing Label No.: EV 162112512 US

Date of Deposit: September 24, 2003

I hereby certify that the below-listed papers or fees are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" Service under 37 CFR § 1.10 on the date indicated above and are addressed to the Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

1. Return Receipt Postcard
2. Utility Patent Application Transmittal (1 page)
3. Fee Transmittal form (1 page)
4. Specification, including Abstract (15 pages)
5. Formal Drawings (3 sheets, Figs. 1-3e)
6. Executed Declaration (8 pages)
7. Executed Power of Attorney by Assignee of the Entire Interest (2 pages)
8. Executed Certificate Under 37 C.F.R. §3.73(b) (2 pages), including copy of executed Assignment (4 pages)
9. Form PTO-1595 (Assignment Recordation Cover Sheet) (1 page)
10. Executed Assignment (4 pages)
11. \$750.00 check for Utility Patent Application filing fee
12. \$40.00 check for Assignment Recordation
13. Information Disclosure Statement (2 pages)
14. Form PTO 1449 (2 pages)
15. Copy of 24 references

Maria Arreola-Flores  
(Typed or printed name of person mailing)

Maria Arreola-Flores  
(Signature of person mailing)

PATENT  
Attorney Docket No. 12-1054

CERTIFICATE UNDER 37 C.F.R. § 3.73(b)

Applicants: James Matthew Murduck, et al.

Application No.: Herewith

Filed: Herewith

For: Al/AlOx/Al RESISTOR PROCESS FOR INTEGRATED CIRCUITS

Name of Assignee: Northrop Grumman Corporation

Type of Assignee: Corporation

certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of either:

A.  An assignment from the inventor(s) (James Matthew Murduck) and (Arnold Herbert Silver) of the patent application identified above to Northrop Grumman Corporation.

OR

B.  A chain of title from the inventor(s), of the patent application identified above, to as shown below:

1. From: \_\_\_\_\_

To: \_\_\_\_\_  
The document was recorded in the U.S. Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, on \_\_\_\_\_.

2. Name change from \_\_\_\_\_  
The document was recorded in the U.S. Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, on \_\_\_\_\_.

3. From: \_\_\_\_\_

To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, on \_\_\_\_\_.

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10/670101  
  
09/24/03

**PATENT**  
**Attorney. Docket. No. 12-1054**

4. From: \_\_\_\_\_

To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office  
at Reel \_\_\_\_\_, Frame \_\_\_\_\_.

[X] Copies of assignments or other documents in the chain of title are attached.

Representatives of the undersigned have reviewed all the documents in the chain of title of the patent application identified above and, to the best of the undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned whose title is supplied below, is empowered to act on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Northrop Grumman Corporation

Date: 7/30/03

Name: Kathleen M. Salmer

Title: Assistant Secretary for Northrop Grumman Corporation

Signature: Kathleen M. Salmer